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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,276	08/18/2003	Ryosuke Kogure	60303.34	2466

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EXAMINER	
SHEEHAN, JOHN P	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/642,276	KOGURE ET AL.	
	Examiner	Art Unit	
	John P. Sheehan	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) *13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 5-12* is/are rejected.

7)☒ Claim(s) *1-4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I claims 1 to 12 in the reply filed on December 19, 2005 is acknowledged.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 5 to 12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the method disclosed for example, in paragraphs 0010 and 0039 of the specification, does not reasonably provide enablement for the claimed process step of "producing a compound phase...." as recited in the last 3 lines of claim 1 and in claim 5. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

I. The last 3 lines of claim 1 encompass any and all methods of treating the solidified alloy so as to provide the recited crystal structure. For example, the last 3 lines of claim 1 encompass any combination of heat treatments and/or working steps including any combination of times and/or temperatures and/or reduction rates. However, the specification discloses only one method of treating the solidified alloy so as to provide the recited crystal structure, for example, see paragraphs 0010 and 0039 of applicants' specification.

II. Applicants' claim 5 reads on producing the crystal structure recited in the claims by a direct casting method. However, there is no enabling disclosure regarding this embodiment in the application as filed. For example, the specification does not disclose the temperature of the melt, the cooling rate, cooling wheel speed, etc. that should be used to make the alloy recited in the applicants' claims. In view of applicants' disclosure, that;

> "nobody has ever reported that the $LaFe_{13}$-based magnetic alloy could be produced successfully by a rapid cooling process" (applicants' specification, paragraph 0044, the last sentence),

the Examiner considers that the applicants' specification should disclose the specifics as to how the crystal structure recited in the claims is obtained by a direct casting method as recited in applicants' claim 5.

Claim Interpretation

5. In view of applicants' disclosure in paragraph 0005 of the specification, the $NaZn_{13}$ crystal structure recited in the instant claims is considered to be the same as the $LaFe_{13}$ crystal structure attributed to the admitted known prior art discussed in paragraph 0002 of the specification.

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1 and 6 to 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the admitted known prior art as discussed in paragraphs 0002 and 0003 of applicants' specification.

In paragraphs 0002 and 0003 of the specification applicants disclose a prior art alloy and method of making the alloy wherein the finished alloy possess the $LaFe_{13}$ crystal structure. As set forth above under the heading "Claim Interpretation", applicants' disclosure in paragraph 0005 of the specification acknowledges that the

$NaZn_{13}$ crystal structure recited in the instant claims is the same as the $LaFe_{13}$ crystal structure attributed to the admitted known prior art discussed in paragraph 0002 of the specification. Thus, the prior art alloy possesses the $NaZn_{13}$ crystal structure recited in applicants' claims 1 and 6 to 12. When calculated out, the prior art alloy disclosed in paragraph 0002 of applicants' specification possesses the following composition in atom %;

La	6.4 to 7 at%
RE	0 to 0.7 at%
Fe	74.3 to 88.2 at%
A	0 to 18.6 at% and
TM	0 to 9.3 at%.

This prior art alloy composition overlaps the alloy composition recited in the instant claims. The prior art alloy is made by melting and casting the alloy and then thermally treating the alloy at a temperature of 1050 ^{0}C for 168 hours to produce the $LaFe_{13}$ structure ($NaZn_{13}$ structure). As drafted applicants' claims 1 and 6 to 12 encompass this thermal treatment taught by the admitted known prior art. Applicants' claim language, "rapidly cooling and solidifying" (claim 1, line 5) does not distinguish over the admitted prior art method of casting. Thus, the admitted known prior art is considered to teach the process steps recited in applicants' claims.

The claims and the admitted known prior art differ in that the applicants' description of the admitted known prior art is silent as to the volume percent of the finished alloy that possesses the $NaZn_{13}$ structure.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy taught by the admitted known prior art has a composition that overlaps the alloy composition recited in the instant claims and therefore is considered to establish a prima facie case of obviousness, In re Malagari, 182 USPQ 549 and MPEP 2144.05. Further, in view of the fact that the alloy taught by the admitted known prior art is made by a process which is the same as applicants' claimed process, the prior art alloy would be expected to posses all the same properties as recited in the instant claims, including the claimed crystal structure, In re Best, 195 USPQ, 430 and MPEP 2112.01.

> "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada,15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best,195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

Allowable Subject Matter

9. Claims 2 to 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for the indication that claims 2 to 4 are directed to allowable

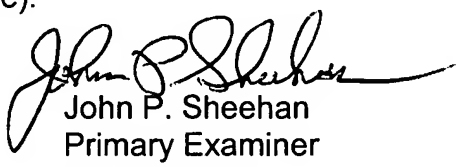
subject matter is that the closest known prior art, that is, the admitted known prior art in paragraphs 0002 and 0003 in the instant specification teaches that the magnetic alloy is annealed at a temperature of about 1050^0C for approximately 168 hours whereas in instant claims 2 to 4 the magnetic alloy is annealed at a temperature of about 400^0C to 1200^0C for about 1 second to about 100 hours. The prior art does not teach or suggest reducing the heat treatment time form 168 hours as taught by the admitted known prior art to from 1 second to 100 hours.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John P. Sheehan
Primary Examiner
Art Unit 1742

jps